

**DII.3200.NT40.Kernel.IG-1**

**Defense Information Infrastructure (DII)  
Common Operating Environment (COE)**

**Version 3.2.0.0**

**Kernel Installation Guide  
(Windows NT 4.0)**

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**Prepared for:**

**Defense Information Systems Agency**

**Prepared by:**

**Inter-National Research Institute (INRI)  
12200 Sunrise Valley Drive, Suite 300  
Reston, Virginia 20191**



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## Preface

The following conventions have been used in this document:

[HELVETICA FONT]	Used to indicate keys to be pressed. For example, press [RETURN].
Courier Font	Used to indicate entries to be typed at the keyboard, operating system commands, titles of windows and dialog boxes, file and directory names, and screen text. For example, execute the following command:  A:\setup.exe
<i>Italics</i>	Used for emphasis.

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## 1. Introduction

This document provides information and guidance needed for proper installation of the Windows NT Operating System Version 4.0 and the Defense Information Infrastructure (DII) Common Operating Environment (COE) Kernel Version 3.2.0.0 for Windows NT 4.0. Reference the *DII COE Integration and Runtime Specification* for more information about the DII COE.

The Windows NT Setup program prepares Windows NT to run on your computer. The Setup program copies the appropriate files onto your computer's hard disk and configures the software needed to run applications and to use the network. The Setup program also guides you through the installation steps and provides system Help for any step where you may need assistance.

Before you run the Setup program, you should note the system and media requirements listed in Section 1.1, *System Requirements*, and answer the questions about the installation listed in Section 1.2, *Installation Preparation*.

### 1.1 System Requirements

This section describes DII COE system requirements for the Windows NT Operating System 4.0 and for the DII COE Kernel.

#### 1.1.1 Hardware Components

The following hardware components are required. The software may reside on a single hard disk or across multiple hard disks.

- Ⓒ **Personal computer.** An 80486 personal computer or higher.
- Ⓒ **Memory.** At least 16 megabytes (MB) of random access memory (RAM) (12 MB minimum is required for Windows NT).
- Ⓒ **Source devices.** A CD-ROM drive to load the operating system; a 3.5-inch high density floppy drive to load the software.
- Ⓒ **Disk space for the operating system, runtime and temporary files, swap space, and tools.** Recommend 200 MB free hard disk space distributed approximately as follows:
  - Windows NT 4.0 Operating System—125 MB
  - DII COE runtime files—1.5 MB
  - Swap space and temporary files—40 MB (recommended)
  - DII COE tools—2.5 MB (developers only).
- Ⓒ **Disk space for segments and data.** Recommend 500 MB free hard disk space for segments and data.

#### 1.1.2 Operating System Component

The Windows NT 4.0 Operating System CD-ROM is required.

### 1.1.3 Kernel Components

Two 3.5" floppy diskettes containing the DII COE Kernel packaged in an InstallShield installer for Windows NT 4.0 are required. The DII COE Kernel contains the COEInstaller runtime tool. Reference the *DII COE System Administrator's Guide (Windows NT 4.0)* for more information about the COEInstaller tool.

## 1.2 Installation Preparation

The following questions must be answered before you install the Windows NT Operating System and the DII COE Kernel. Your system administrator should provide you with the appropriate answers.

1. What kind of display adapter card is installed in your computer?
  - C How much video RAM is installed?
  - C What is your monitor's refresh rate?
  - C What resolution do you plan to use on your display (e.g., 1024 x 768, 800 x 600)?
  - C What color depth do you plan to use on your display (e.g., 256 colors, 65536 colors)?
2. Does the computer have a network adapter card? If so,
  - C What type of network adapter does your computer have?
  - C What is the network adapter card's interrupt request number (IRQ)?
  - C What is the base input or output (I/O) address?
3. Will the computer use a network? If so,
  - C What is the name of the computer?
  - C What is the name of the workgroup or the domain that the computer will join?



4. Is there a Dynamic Host Configuration Protocol (DHCP) server?
  - C If so, what is the network address of the DHCP server?
  - C If not, what is your computer's Internet Protocol (IP) address and network mask?
5. Is the computer using Domain Name Service (DNS)? If so,
  - C What is the computer's domain name?
  - C What is the IP address of the DNS server?
6. Is a printer connected directly to the computer? If so,
  - C What is the name of the printer?
  - C What is the printer model?
  - C What port does the printer use?
7. What is the server clock time?
8. What should the administrator's password be?

### **1.3 Referenced Documents**

The following documents are referenced in this guide:

- C DII COE I&RTS:Rev 3.0, *Defense Information Infrastructure (DII) Common Operating Environment (COE) Integration and Runtime Specification Version 3.0*, January 1997
- C DII.3200.NT40.AG-1, *Defense Information Infrastructure (DII) Common Operating Environment (COE) Version 3.2.0.0 System Administrator's Guide (Windows NT 4.0)*, June 13, 1997
- C *Microsoft Windows NT Workstation Installation Guide*, Microsoft Corporation, 1994.

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## 2. Installing the Windows NT Operating System

The Windows NT Operating System is distributed by Microsoft. Complete instructions for installing the operating system are provided in the *Microsoft Windows NT Workstation Installation Guide*, which should accompany the software.

This section supplements the *Microsoft Windows NT Workstation Installation Guide* to include instructions specific to the DII COE configuration. Even if the Windows NT Operating System is already installed on your computer, you still should review this section to ensure that the operating system is configured properly for the DII COE.

The following are recommendations for installing the Windows NT 4.0 Operating System for the DII COE:

### Setup Options

- C It is recommended that you select the `Typical Setup` option unless you have experience installing the Windows NT Operating System.

### Partitioning the Hard Disk

- C If you choose to create a new partition for Windows NT, it is recommended that you partition the entire drive for the Windows NT Operating System.
- C The DII COE can only be installed on an NT file system (NTFS). If you are creating a new partition for Windows NT, you must format it using NTFS.

### General Configuration

- C It is recommended that you install the Windows NT system files in the default directory, `\WINNT`.

### Networking

- C Windows NT supports multiple network protocols. It is recommended that you enable Transmission Control Protocol/Internet Protocol (TCP/IP) transport as a minimum. You may enable additional protocols, if desired.
- C To avoid confusion, your computer name should be the same as your TCP/IP host name. If you are unsure of your TCP/IP host name, contact your system administrator.

## Miscellaneous

- C When creating new accounts, remember that passwords are case sensitive. If you have difficulty entering your password, verify that the [CAPS LOCK] key is turned off.
- C It is recommended that you wait until the entire installation is finished before changing the display settings. Use the `Display` icon in the `Control Panel` to change your video configuration after running the Setup program.
- C It is recommended that you create an emergency repair floppy diskette. This repair floppy diskette must be updated each time you change your system configuration (e.g., network card, video display).

## Service Packs

- C Windows NT service packs are released intermittently to correct problems with the Windows NT Operating System. Each service pack contains corrections from all previous service packs.
- C No service pack is installed during the normal Windows NT Version 4.0 Operating System installation. Service packs are distributed in several formats including CD-ROM and compressed archived files available via the Internet. To install a service pack, run `update.exe`. The location of this file may vary by distribution media. The `update.exe` file is usually found under the `1386` directory on most distributions. Certain service packs also may be available on separate disk sets as part of a DII distribution.

### 3. Installing the DII COE Kernel for Windows NT

The DII COE Kernel for Windows NT consists of DII COE runtime files. The DII COE Kernel Installer performs the following actions: (1) Loads the DII COE runtime files onto the user's hard drive and (2) configures the DII COE for the user's computer.

Before installing the Version 3.2.0.0 Kernel, you must determine if your system is loaded with a previous version of the DII COE Kernel. If your system is loaded with the Version 3.0.0.5 Kernel or earlier, proceed to Section 3.1, *Installing the Kernel Over the Version 3.0.0.5 Kernel or Earlier*. If your system is loaded with the Version 3.0.0.6 Kernel or later, proceed to Section 3.2, *Installing the Kernel Over the Version 3.0.0.6 Kernel or Later or Installing the Kernel for the First Time*. If your system is not loaded with a previous version of the DII COE Kernel, also proceed to Section 3.2, *Installing the Kernel Over the Version 3.0.0.6 Kernel or Later or Installing the Kernel for the First Time*.

#### 3.1 Installing the Kernel Over the Version 3.0.0.5 Kernel or Earlier

If the DII COE Kernel Version 3.0.0.5 or earlier is already loaded on your system, you must perform the following steps to install the DII COE Version 3.2.0.0 kernel for Windows NT Version 4.0.

- STEP 1: **Insert the first installation floppy diskette.** Place the first DII COE installation diskette in drive A:.
- STEP 2: **Run the installation executable file.** Click on the `Start` button on the Windows NT taskbar and click on the `Run...` option. The `Run` window appears. Type `A:\setup.exe` in the `Open` field and click on the `OK` button.
- STEP 3: **Review information about the installation.** The `DII COE Kernel Installer` and `DISA` logos appear, followed by the `Welcome` window (Figure 1). Read the text in the window and click on the `Next` button to continue the installation.

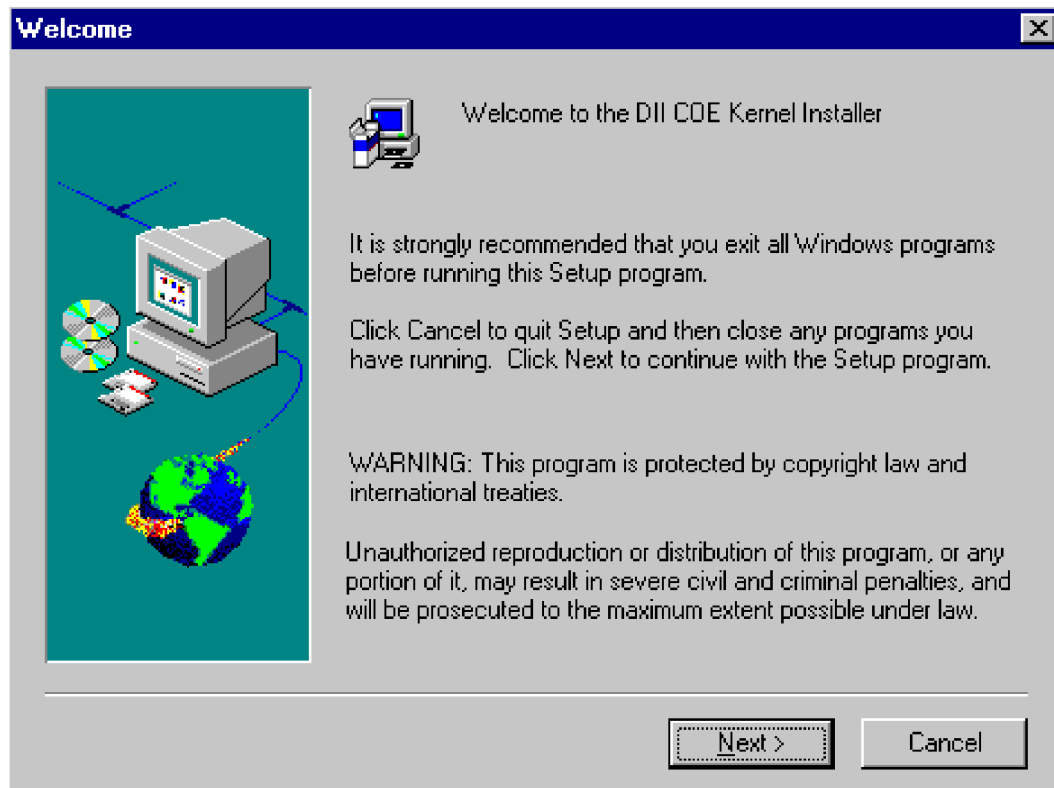


Figure 1. Welcome Window

- STEP 4: Acknowledge that the installation procedure removes any previously installed segments' registry entries and decide if you want to continue.** If a previous version of the DII COE Kernel is loaded on the machine, a dialog box appears with the following message. If this dialog box does not appear, proceed to STEP 6.

This is a destructive kernel load! Segments already installed will lose their registry entries. Segments which are part of the kernel installation (COE, SysAdm, and WINNT) will automatically be replaced. Do you wish to continue?

As this message states, segments that are part of the kernel installation, such as the COE segment, the System Administration segment, and the Windows NT COTS segment, will be replaced. In addition, registry entries for segments that are already installed will be removed.

If you want to proceed with the installation despite losing registry entries, click on the **Yes** button. If you want to cancel the installation and exit from the procedure, click on the **No** button.

**STEP 5: Determine if you want to deinstall existing segments using the DII COE Installer.** The following dialog box appears:

```
During the kernel installation, you will be given the
option to delete installed segments (not a complete deinstall).
It is recommended that you exit and use the DII COE Installer
to deinstall them properly.
Do you wish to continue?
```

As stated in this message, the kernel installation program allows you to delete segment directories that were installed on previous versions of the DII COE Kernel. Deleting segments this way will only delete the segment directories, rather than perform all appropriate deinstallation processing. Therefore, if the segments should be removed from the machine, it is recommended that you use the DII COE Installer to deinstall them properly before loading the DII COE Version 3.2.0.0 Kernel. Reference the *DII COE System Administrator's Guide (Windows NT 4.0)* for information about deinstalling segments. Permanent segments cannot be deinstalled with the DII COE Installer. Permanent segments must be deleted during the kernel installation, as described in STEP 6.

If you want to proceed with the installation, click on the **Yes** button. If you want to cancel the installation and exit from the procedure, click on the **No** button.

**STEP 6: Choose segments to delete from disks.** The following installation prompt appears for each individual segment directory. If no segments have been installed, no prompts will appear.

```
Do you wish to delete the [drive:name of segment directory]
directory?
```

If the segment directory should not be deleted from the disk, click on the **No** button. If the segment directory should be deleted, click on the **Yes** button.

If you do not choose to delete one or more segment directories, the segment(s) will remain on disk but will no longer appear in the **Currently Installed Segments** panel of the DII COE Installer window. Reference the *DII COE System Administrator's Guide (Windows NT 4.0)* for information about the DII COE Installer window.

**STEP 7: Determine if you want to delete the \h\USERS directory.** The following installation prompt appears for the \h\USERS directory:

Do you wish to delete the [drive:]\h\USERS directory?

The \h\USERS directory may contain data from previously installed segments. If you chose to delete all of the segment directories in STEP 6, you also should delete the \h\USERS directory. If the directory should not be deleted from the disk, click on the **No** button. If the directory should be deleted, click on the **Yes** button.

**STEP 8: Select the destination drive.** The **Select the DII Drive** window appears (Figure 2). Click on the appropriate destination drive toggle to indicate the drive on which the DII COE will be installed (e.g., **Drive C**, **Drive D**, or **Drive E**) and then click on the **Next** button.

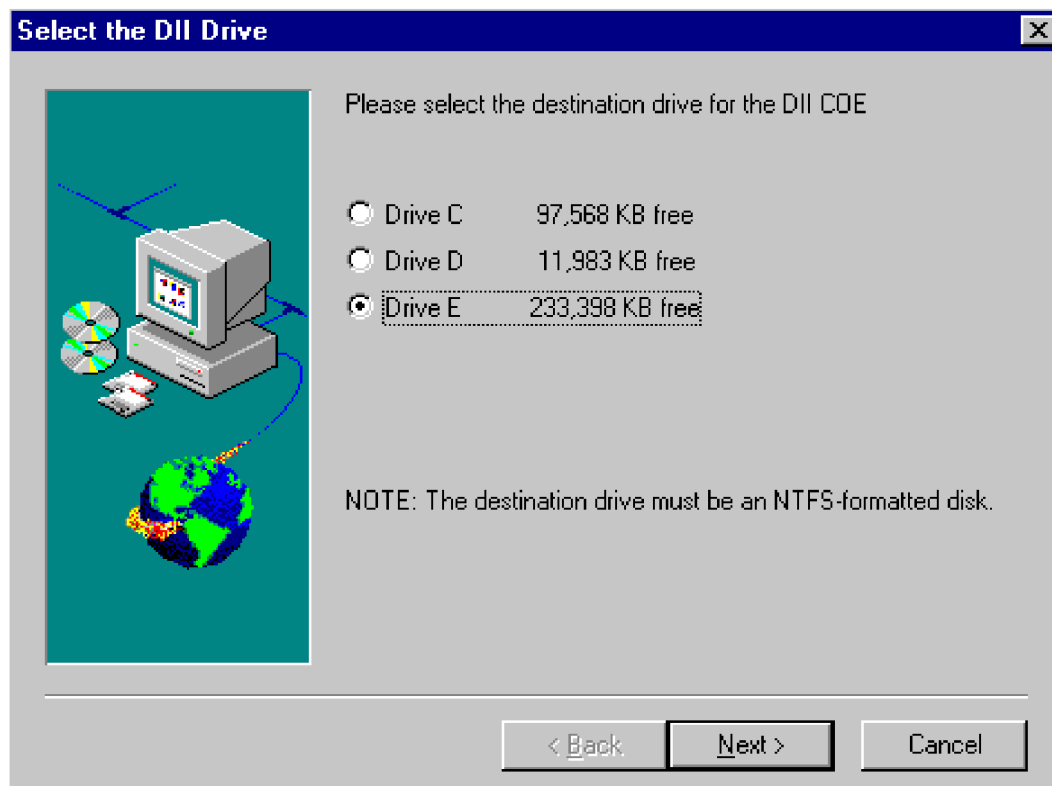


Figure 2. Select the DII Drive Window

**NOTE:** The destination drive must be an NTFS-formatted disk.

**STEP 9: Review the status of the installation.** A status bar in the **Setup** dialog box shows the progress of the installation and includes the following message:



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**STEP 10: Insert the second installation floppy diskette.** The Setup Needs The Next Disk dialog box appears with the following message:

Please insert DII COE Installation Disk #2

Remove the first installation floppy diskette, and insert the second installation floppy diskette. Click on the OK button. The status bar in the Setup dialog box continues to show the progress of the installation.

**STEP 11: Reboot your computer.** The Reboot Windows window appears (Figure 3).

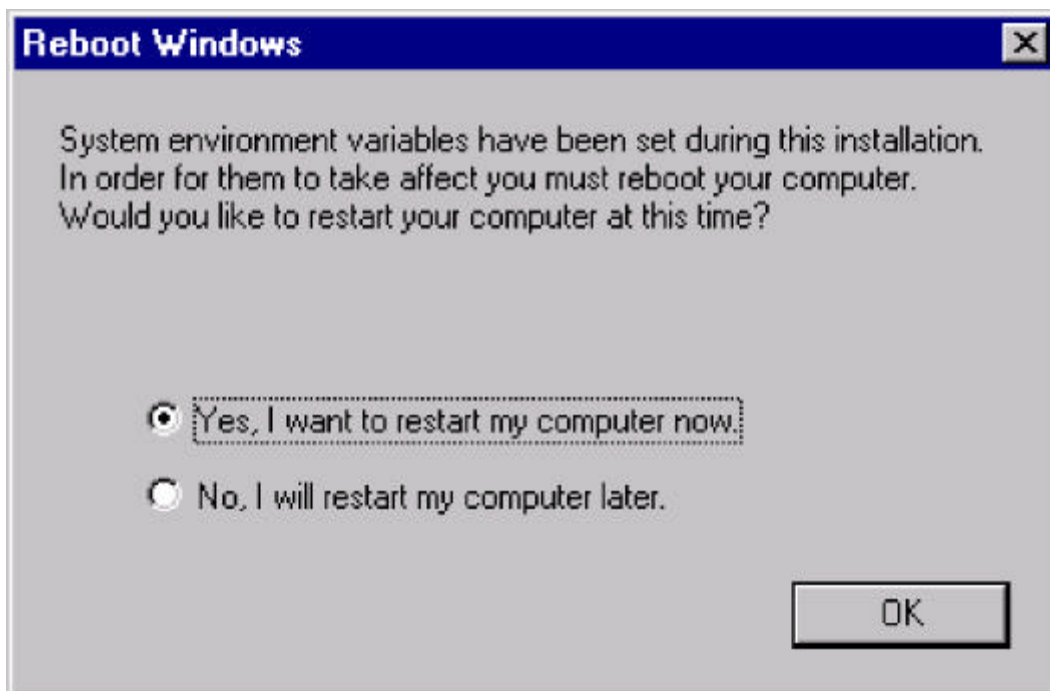


Figure 3. Reboot Windows Window

The Yes, I want to restart my computer now toggle is selected by default. You must first remove the diskette from the drive. Then click on the OK button to reboot the computer.

The computer reboots and the installation is complete.

### 3.2 Installing the Kernel Over the Version 3.0.0.6 Kernel or Later or Installing the Kernel for the First Time

If the DII COE Kernel Version 3.0.0.6 or later is already loaded on your system or if you are installing the DII COE Kernel for the first time, you must perform the following steps to install the DII COE Version 3.2.0.0 kernel for Windows NT Version 4.0.

- STEP 1: **Insert the first installation floppy diskette.** Place the first DII COE installation diskette in drive A:.
- STEP 2: **Run the installation executable file.** Click on the `Start` button on the Windows NT taskbar and click on the `Run...` option. The `Run` window appears. Type `A:\setup.exe` in the `Open` field and click on the `OK` button.
- STEP 3: **Review information about the installation.** The `DII COE Kernel Installer` and `DISA` logos appear, followed by the `Welcome` window (Figure 1). Read the text in the window and click on the `Next` button to continue the installation.
- STEP 4: **Select the destination drive.** The `Select the DII Drive` window appears (Figure 2). Click on the appropriate destination drive toggle to indicate the drive on which the DII COE will be installed (e.g., `Drive C`, `Drive D`, or `Drive E`) and then click on the `Next` button.

<b>NOTE:</b> The destination drive must be an NTFS-formatted disk.
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- STEP 5: **Review the status of the installation.** A status bar in the `Setup` dialog box shows the progress of the installation and includes the following message:

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- STEP 6: **Insert the second installation floppy diskette.** The `Setup Needs The Next Disk` dialog box appears with the following message:

Please insert DII COE Installation Disk #2

Remove the first installation floppy diskette, and insert the second installation floppy diskette. Click on the `OK` button. The status bar in the `Setup` dialog box continues to show the progress of the installation.

- STEP 7: **Reboot your computer.** The `Reboot Windows` window appears (Figure 3). The `Yes, I want to restart my computer now` toggle is selected by default. You must first remove the diskette from the drive. Then click on the `OK` button to reboot the computer.

The computer reboots and the installation is complete.